

	Type	Hits	Search Text
6	BRS	2736	(engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)
7	BRS	2297	((engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)) and adjust\$4
8	BRS	1820	((((engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)) and adjust\$4) and (signal or command)
9	BRS	245	(((((engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)) and adjust\$4) and (signal or command)) and (adjusted with signal)
11	BRS	190	(((((engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)) and adjust\$4) and (signal or command)) and (adjusted with signal)) and variation\$1
12	BRS	134	((((((engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)) and adjust\$4) and (signal or command)) and (adjusted with signal)) and variation\$1) and actual
13	BRS	134	((((((engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)) and adjust\$4) and (signal or command)) and (adjusted with signal)) and variation\$1) and actual) and solenoid
14	BRS	109	((((((((engine and (fuel with(adjust\$4 or correct\$4 or trim\$4))) and solenoid and (cam or variation\$1 or measured or nominal)) and adjust\$4) and (signal or command)) and (adjusted with signal)) and variation\$1) and actual) and solenoid) and electronic\$4

	DBs	Time Stamp	Comments	Error Definition
6	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:22		
7	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:22		
8	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:23		
9	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:48		
11	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:28		
12	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:29		
13	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:29		
14	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2001/05/04 12:30		

1/1 LGST (1/1) - (C) LEGSTAT
PN - US 5634448 [US5634448]
AP - US 251549/94 19940531 [1994US-0251549]
DT - US-P
ACT - 19940531 US/AE-A
APPLICATION DATA (PATENT)
{US 251549/94 19940531 [1994US-0251549]}
- 19940926 US/AS02
ASSIGNMENT OF ASSIGNOR'S INTEREST
CATERPILLAR INC. 4H PARK ROAD, PONTIAC, ILLINOIS 61629-6490 *
SHINOGLER, RONALD D. : 19940721; SMITH, VERNON R. : 19940803; DEKEYSER,
RICHARD A. : 19940815; GLASSEY, STEPHEN : 19940722;
- 19970603 US/A
PATENT
UP - 1999-18

No reexam, reissue, litigation etc on this patent was found.

LEVEL 1 - 1 OF 1 PATENT

<5,634,448>

<=> GET 1st DRAWING SHEET OF 7

Jun. 3, 1997

Method and structure for controlling an apparatus, such as a
fuel injector, using electronic trimming

CORE TERMS: fuel, delivery, injection, trim, measured, engine, nominal, timing,
actuating, indicative...

Your search request has found no CASES.

Your search request has found no ITEMS.

Your search request has found no STORIES.

1/39/1

DIALOG(R)File 345:Inpadoc/Fam.& Legal Stat
(c) 2000 EPO. All rts. reserv.

12735879

Basic Patent (No,Kind,Date): DE 19520037 A1 951207 <No. of Patents: 003>

Patent Family:

Patent No	Kind	Date	Applic No	Kind	Date	
DE 19520037	A1	951207	DE 19520037	A	950531	(BASIC)
JP 7332142	A2	951222	JP 95132052	A	950530	
US 5634448	A	970603	US 251549	A	940531	

Priority Data (No,Kind,Date):

US 251549 A 940531

PATENT FAMILY:

GERMANY (DE)

Patent (No,Kind,Date): DE 19520037 A1 951207

VERFAHREN UND STRUKTUR ZUM STEuern EINER VORRICHTUNG, WIE
BEISPIELSWEISE EINER BRENNSTOFFEINSPRITZVORRICHTUNG UNTER VERWENDUNG
ELEKTRONISCHER TRIMMUNG Regulation structure and procedure for e.g.
electronic fuel injection (German)

Patent Assignee: CATERPILLAR INC (US)

Author (Inventor): SHINOGL Ronald D (US); SMITH VERNON R (US);
DEKEYSER RICHARD A (US); GLASSEY STEPHEN F (US); AL-CHARIF YASSER A
(US)

Priority (No,Kind,Date): US 251549 A 940531

Applic (No,Kind,Date): DE 19520037 A 950531

IPC: F02D-041/30; G05B-013/00

Derwent WPI Acc No: G 96-021604; G 96-021604

Language of Document: German

GERMANY (DE)

Legal Status (No,Type,Date,Code,Text):

DE 19520037	P	940531	DE AA	PRIORITY (PATENT APPLICATION) (PRIORITAET (PATENTANMELDUNG))
			US 251549	A 940531
DE 19520037	P	950531	DE AE	DOMESTIC APPLICATION (PATENT APPLICATION) (INLANDSANMELDUNG (PATENTANMELDUNG))
			DE 19520037	A 950531
DE 19520037	P	951207	DE A1	LAYING OPEN FOR PUBLIC INSPECTION (OFFENLEGUNG)

JAPAN (JP)

Patent (No,Kind,Date): JP 7332142 A2 951222

METHOD AND SYSTEM OF CONTROLLING DEVICE SUCH AS FUEL INJECTOR BY
ELECTRONIC ADJUSTMENT (English)

Patent Assignee: CATERPILLAR INC

Author (Inventor): RONARUDO DEII SHINOOGURU; BUAANON AARU SUMISU;
RICHIIAADO EI DEKIISAA; SUTEIIBUN EFU GURATSUSHII; YATSUSAA EI
ARUKAARIFU

Priority (No,Kind,Date): US 251549 A 940531

Applic (No,Kind,Date): JP 95132052 A 950530

IPC: F02D-041/40

Derwent WPI Acc No: G 96-021604

Language of Document: Japanese

UNITED STATES OF AMERICA (US)

Patent (No,Kind,Date): US 5634448 A 970603

METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL
INJECTOR, USING ELECTRONIC TRIMMING (English)

Patent Assignee: CATERPILLAR INC (US)

Author (Inventor): SHINOGLER RONALD D (US); SMITH VERNON R (US);

DEKEYSER RICHARD A (US); GLASSEY STEPHEN F (US); AL-CHARIF YASSER A
(US)

Priority (No,Kind,Date): US 251549 A 940531

Applic (No,Kind,Date): US 251549 A 940531

National Class: 123480000; 073119000A; 123478000

IPC: F02D-041/34; F02D-041/40

Derwent WPI Acc No: G 96-021604

Language of Document: English

UNITED STATES OF AMERICA (US)

Legal Status (No,Type,Date,Code,Text):

US 5634448 P 940531 US AE APPLICATION DATA (PATENT)
(APPL. DATA (PATENT))

US 251549 A 940531

US 5634448 P 940926 US AS02 ASSIGNMENT OF ASSIGNOR'S
INTEREST
CATERPILLAR INC. 4H PARK ROAD, PONTIAC,
ILLINOIS 61629-6490 ; SHINOGLER, RONALD D. :
19940721; SMITH, VERNON R. : 19940803;
DEKEYSER, RICHARD A. : 19940815; GLASSEY,
STEPHEN : 19940722;

US 5634448 P 970603 US A PATENT